

Sea Urchin Zone Council Meeting

4:30 pm Thursday, May 16, 2013

Maine DOT 219 Hogan Road, Bangor, ME

DMR staff: Trisha De Graaf, Linda Mercer and Dale Sprowl

SUZC Members: Larry Harris, Joe Leask, Steve Eddy, Tracey Sawtelle, Teresa Johnson, Brian Preney, William Smith, Ed Fagonde, Clint Richardson.

Public: Colby Sawtelle

Sea Urchin Zone Council Research Subcommittee Meeting

Steneck et al. 2013 paper "*Ecosystem flips, locks, and feedbacks: The lasting effect of fisheries on Maine's kelp forest*" Discussion

L. Harris – Larry reviewed the handout of pros and cons of the paper (Appendix A). The paper ignores importance of *Chondrus* (Irish moss) and the understory (perennial seaweeds). *Chondrus* was the dominant algae. Also it was common knowledge that urchin barrens are important to urchin recruitment. That's why leaving some urchins on the bottom is so important – to maintain disturbance and prevent kelp from taking over. The paper lacks reference to Wittman and other papers (Dearborn at UMaine). There is no question there are alternate stable states – barrens and kelp beds that can perpetuate for a long time. There has been a change in species composition of the red algae – *Polysiphonias*, *Neosiphonias*, and now *Heterosiphonia japonica* since sea urchins turned the Gulf of Maine to a barren in the 1980-90s, and now has reverted back to kelp forest – the species composition has changed. There were vast urchin barrens in Canada and Eastport. First massive die-off along the Nova Scotia coast occurred in the 80s. The paper discusses *Cancer irroratus* as major predator, when it is really *Cancer borealis*, which was not found any further east than Penobscot Bay in the 1990s. Larry agrees that the loss of predators (cod, wolfish, etc.) is a factor in population increase.

Will urchins rebuild from deeper water? Can we look at survey data by depth?

J. Leask – fishermen are catching cod up inside in lobster traps. Casco Bay lobstermen are picking up a Federal Handgear A permit so they can land them.

L. Harris –I have been observing urchin settlement on collection panels since 1983 in Cape Neddick & Isle of Shoals and 1994 in Eastport. Recruitment at the southern sites is way down, in the 10s per meter square, compared to the 1000s.

Discussion about coralline algae – preferred settlement substrate.

Are we locked into a new steady state or is it a recruitment issues?

T. De Graaf - What about warming ocean waters, how will that affect urchins in the future?

L. Harris – Urchins like cold water, southern extent of range is tip of Cape Cod – Provincetown. There are black sea urchins further south, different species, lower roe content and larger spines. Warmer water will mean that spawning will be earlier in the year.

S. Eddy: Ideal hatchery temperature for spawning 10-12 C. Any higher and you have issues with bacteria, etc.

L. Harris: Scheibling paper found correlation of die offs in Canada with hurricane events. Perhaps there are parasites or muddy waters or something else that is brought in by the strong wind & wave action that stresses them out. We had some big hurricanes last fall, so not sure if that will cause die offs here in Maine.

B. Preney: there were die offs, but they were up inside bays, not in exposed, outer areas.

Sea Urchin Zone Council Meeting

B. Preney - called the meeting to order at 4:50.

Welcome and review of agenda

Approval of last meeting minutes (4/21/13)

B. Preney- Minor change in the minutes – Brian talked about intangibles (not tangibles), for example a diver being more selective on the bottom or a dragger not pounding the bottom.

C. Richardson moved to accept the minutes with the revision, T. Sawtelle seconded. *Passed unanimously.*

DMR Updates - 2013-14 Season Rulemaking (Appendix B for slides)

T. De Graaf – After thorough evaluation, it has been determined that the SUZC's recommendation for a 38 day season, 7 tote limit and the 1/16 increase and decrease in the size measure would not have achieved the estimated 20% reduction in effort. This is due to the fact that the estimated 5% savings from the increase in the minimum size would have no positive effect on the resource as it would have only had an impact in Cobscook Bay where the urchins are small. Therefore, the actual estimated conservation equivalency achieved by the SUZC's recommendation would have been 15%. The Commissioner commitment to not making any changes to input (drag size, escape vent on back of drag) or output (days, totes, sizes) measures for 3 additional years was based on achieving a 23% effort reduction. After several hours of debate, it became apparent to the Commissioner that the SUZC was unable to come up with a recommendation that would meet that goal, therefore he was willing to accept a recommendation that was within that range (19-23%) due to the level of uncertainty that surrounds all the estimates. Unfortunately, the SUZC's recommendation does not achieve that reduction. After discussions with patrol regarding recommendation, the Commissioner came to the conclusion that having two different size regulations between Zone 1 & 2 and even within Zone 2 itself as the minimum size change was not for Cobscook, would present a number of challenges for both enforcement and the industry, in addition to the fact that it falls short of the 23% goal. Therefore, the Commissioner has decided to move forward with the SUZC's recommended 38 day calendar and 7 tote limit for rulemaking as he wanted to keep the proposed rule as close as possible to the SUZC recommendation, despite removing the size changes. This proposal will only achieve a 13% reduction in effort and it remains uncertain as to whether or not this will have a positive impact on the resources. Therefore, he will not be able commit to not making additional input or output changes over the next three years as we did not achieve the 23% goal nor are we certain that the current proposal will have a significant positive impact on the resource. Therefore, we may need to re-visit next year based on the survey results.

W. Smith – I think it was a wise decision on the Commissioner's part. Bringing up urchins on a cold day would likely result in mortality.

T. Sawtelle – I agree with Killer.

J. Leask – I wish that last year we had gone with a 30 days and no tote limit – then we wouldn't not have had to come back and revisit this year. I still support a 30 day season with no tote limits and I don't think tote limits offers any real conservation, and it is bore on the shoulders of the few (highliners). However, there are some areas where more than 7 totes are taken, so this may be good. Would like to see Zone 1 also put tote limit in by their own choice.

S. Eddy – At the last meeting it seemed like a fine line between the number of days and keeping processors supplied.

E. Fagonde – I was very frustrated with last meeting and this council needs to get its act together for the Commissioner to take us seriously. Need draggers to stop dragging through small urchins or use a panel.

C. Richardson - Can we get some stuff done without a crowd tonight? What about a tote limit for Zone 1?

[A Lot of discussion about a 10 tote limit for Zone 1 and how to implement for next season]

T. De Graaf – There is no tote limit provision in the proposed rule for Zone 1, so I am not sure if we can put one in based on public comment, however, I will check with AG to see if it could happen with proposed rule. It is not possible for the Department to solicit comments at this time on the rule, however, everyone is welcome to submit comments either by testimony at a public hearing or by writing to the department once the public comment timeframe opens, which should be next week on May 22. All license holders will get a post card with the dates of the hearings, which are tentatively scheduled for June 10 in Wiscasset at 6pm and June 13 in Ellsworth at 6pm. I believe the comment period will end on June 24. Once the rule is published, it will go on our website and I will email out the finalized details to the council and interested parties list.

How many people in Zone 1 even catch 10 totes? Urchins seem to be sustaining at current level. If there are no processors, we'll be done. We need some help from Mother Nature. Some think that 10 totes would be too liberal.

Discussion: 2013-14 Season – Whiting & Denny's Bay (Appendix B for slides & C for proposed calendar)

T. De Graaf: Due to the fact that the discussions surrounding the Zone 2 season recommendation took so long at the last SUZC meeting, a recommendation was not made for the days for Whiting & Denny's Bay. So, I reviewed past minutes and input I have had from industry as well as tried to match access up with the scallopers for dive and drag days and set up calendars with 9 days of access in there, which is 5 more days than last year. For early season, there are some days in October and November, while for late season February and March, with everyone having days in there in December. I am looking for input during the public comment period on how industry would like to refine this calendar, but wanted to let the council know how I came up with the days.

T. Sawtelle- I would like to have more days in December. I don't think anyone would want in there in October; December is when the prices are better. We should have 12 days, not 9.

J. Leask - I would like dive days to be on Mondays.

T. Sawtelle – I would like to know scallop season first. Why does the Scallop Advisory Council get to pick when we get access in there, they are driving the SUZC season. They always pick their days after us and they always overlap. Should be able to fish both licenses in there on separate days if we have them.

Comment: For Whiting & Denny's Bay, concerned about divers going after draggers – visibility and safety issue.

T. De Graaf - Let us know what changes you want for Whiting's & Denny's Bay during rulemaking. Try to get some agreement amongst yourselves and comment at the hearings.

Discussion: Owner-Operator

T. De Graaf – The Commissioner wishes to pursue for scallops, mussels, sea cucumbers and sea urchins. Over the past month and a half, we have been discussing the merits of owner-operator with the scallop fishery, and I would like to start these discussions with this industry as well. Owner-operator is consistent with Maine's historical approach to its fisheries, ensuring that fishermen are invested in their fisheries, responsible for the activities on their vessel, and avoiding corporate ownership and license consolidation. The Commissioner wishes to move forward with conversations regarding an owner-operator requirement for all mobile fisheries (scallops, sea cucumbers, mussels as well as sea urchins) over the coming year for a bill that will be submitted to the Legislature next winter. Over the past month during discussions with the scallop industry, the following points were brought up during discussions:

- May increase effort, as multiple licenses working on one vessel. They may bring more boats into fishery
- Could decrease effort, as a vessel would only be able to participate in one "early" or "late" season
- Will take away non-license holder opportunities, as they can currently take a license holder on board
- Charge owner of vessel a fine, in addition to license holder instead
- Current business arrangements would be impacted [hired Captains/Crew license holders]
- Won't reduce effort, can form a corporation; sign over 51% ownership.
- Would help with violations/suspensions as vessel would be tied to license
- Suspension should be entire following season

After these discussions, the Department realizes that a grandfathering provision will need to be made so as to not impact current business arrangements with hired captains/crew member license holders. If there was a change to the arrangement, the license holder could still access the fishery; however, it could only be done as an owner-operator.

Question - What about medical issues?

T. De Graaf – A temporary medical waiver would be possible, as it currently exists in the lobster fishery, which is already owner-operator.

B. Preney – Divers can't get a medical waiver.

Comment: Most of the multi-boat operators have friends with licenses – doesn't see more people getting in or out. Doesn't see a big change in the fishery by doing this. Shouldn't make a change that doesn't accomplish much of anything.

T. De Graaf: The biggest impact for the urchin fishery would be to prevent taking a different license holder to fish both the early and the late seasons – this could have an impact on effort in the fishery.

T. Sawtelle -What about people with double licenses. Can't grandfather everyone in. What if I don't want to fish anymore – what happens to that license? How can a person ever get a license? Transferability? There was a one-time transfer for urchin licenses around 2002. Currently, if folks are picking up an early and a late

season license, there are the overlap days of both season that one of those licenses is not getting fished. So, may increase effort if go to owner-operator.

Comment: Need to find out how many double licenses there are to discuss further at the next meeting. Tracy – at least 7 down his way.

MOTION: Have Trish find out how many licenses this could impact. If only a handful, doesn't make sense to spend time on it. W. Smith makes motion, E. Fagonde seconded. No discussion. 8 in favor, 1 abstention.

MOTION PASSED.

Unfinished Business and General Orders

B. Preney – What about a Zone 1 tote limit? We have a quorum – does the Council want to vote on this?

T. Sawtelle - Should put on agenda for next meeting so people have notice of it.

T. De Graaf - The Council cannot provide input on the rule at this meeting. Also DMR made a commitment for 2 seasons for 15 days in Zone 1. However, if we receive numerous comments for a tote limit in Zone 1 indicating that is what industry wants, the Commissioner will possibly consider it for next year.

C. Richardson - It's a conservation method that could ease things up on the other end. Maybe consider for next year and if the survey comes back looking good, if we have a tote limit, possibly we could get more days.

MOTION: Put Zone 1 tote limits on the next meeting agenda. C. Richardson moved and J. Leask seconded. ***Unanimous.***

T. Sawtelle – For the current Zone 2 tote limit – there are different sized totes. You need to define how much you can put in the tote. Talked about 85-90 pounds.

T. De Graaf – The proposed language for the totes is “A standard size stackable fish tote is defined as 28” Long x 16” Wide x 11” Deep when measured inside at the shelf level. Standard size stackable fish totes, with respect to the urchin fishery, means totes shall not be filled with sea urchins in a manner which prevents them from being stacked one on top of the other as designed. The bottom of one tote shall rest on the shelves of the tote below.” The intent is not to have rounded and crushed urchins. Enforcement will be at the Marine Patrol's discretion.

J. Leask – I drive urchins to Portland. Will I be able to keep multiple days of catch?

T. De Graaf – No, you will only be able to be in possession of 7 totes of urchins at a time.

Set next meeting date and time

Trish will explore the possibility of holding a special meeting only for Zone 1 to discuss tote limits – June 4 or 5, however, may not be able to due to comment period being open at that time. So, she will get back to the council on this.

Next meeting agenda items: FMP and Mick's bill. Leave date/time tentative at this time.

Adjourned 6:43.

Appendix B

Larry Harris's SUZC Research Subcommittee Meeting Handout

SOME THOUGHTS AND OBSERVATIONS RELATING TO THE STENECK ET AL PAPER

Positives: There has been overfishing of finfish in the Gulf of Maine and there are certainly alternate stable states that include kelp bed communities and urchin barren communities. Crabs are major predators on urchins and overfishing of urchins has certainly occurred and still happens under certain circumstances.

Some background on the topic: Steneck claims that seaweed dominated systems are not good for sea urchins and Irish Moss, *Chondrus crispus*, is a good place for crabs and not so good for young sea urchins. --- The Gulf of Maine shallow water rocky habitats were dominated by kelp beds with Irish Moss the dominant understory species for most of the century and before and there was an active industry harvesting Irish Moss prior to 1980, when sea urchin populations exploded and removed most of the kelp beds and converted them to urchin barrens. The paper talks about the shift at Pemaquid Point, but many other studies documented this shift from Nova Scotia to New Hampshire. Studies in Nova Scotia documented this pattern way before it happened in most of the Gulf of Maine. Most of Passamaquoddy Bay and Cobscook Bay were urchin barrens in 1970 and parts of it remain that way now. A paper in 1973 documented urchin barrens in Grand Manan in 1973 and discussed the possibility of a fishery for urchins.

A researcher in Nova Scotia suggested that it was overfishing of lobsters that caused the outbreak of urchins, but researchers at U of Maine (Vadas and Elner) argued that crabs were more important. The first die-off of urchins in Canada occurred in 1980-81, way before such die-offs were observed in Maine. The die-offs are becoming more common.

The same Canadian researcher, Ken Mann, reported that recruitment of sea urchins was poor in kelp beds due to predation and much better in barren habitats. Harris and students found the same thing at the Isles of Shoals and southwestern Maine.

The restocking study at Cape Elizabeth was funded by the SUZC Research Fund. In the first year, the urchins were taken from cold water and kept out of water in late summer to be measured and then dumped in piles on the bottom in much warmer conditions. Hard to tell whether crabs killed the urchins or came to feed on the dead and dying animals. The crab studies that fall were with *Cancer irroratus* and not *C. borealis*. The second year, the urchins were handled better and set out much earlier and survival was good until late summer when the over abundance of *C. borealis* went into feeding frenzy mode as they do in the fall in preparation for winter. The paper is correct in that there was a major population explosion of *C. borealis* for a few years at that time.

Populations of *Cancer borealis* have declined to more normal numbers and there are signs of urchins recruiting in patchy areas (the pattern at Pemaquid before the large outbreak around 1980). Settlement of urchin juveniles is way down along the coast and that is bad for recruitment and population recovery. Nothing is mentioned of all the invasive species that have greatly altered the bottom communities in ways that may inhibit sea urchin recruitment. There is much that is left out in terms of research done by others as if most of what was done in this region was done by the authors – a common problem in research.

Appendix B T. De Graaf's Slides

2013-14 Season Proposed Rule – Zone 2

- **SUZC Recommendation: 38 days + 7 totes + increase in min of 1/16 (Not Cobscook)+ decrease in max of 1/16**
 - Estimated 20% reduction
 - -6% *days* + 19% *trays* + 5% *min* + 2% *max*
 - Actual 15% reduction
 - *Due to no increase in min (5%) size in Cobscook*
- **Proposed Rule: 38 days + 7 totes**
 - Logistical enforcement challenges with 2 diff sizes between Zone 1 & 2, let alone within Zone 2
 - Estimated 13% reduction
 - -6% *days* + 19% *trays*
- **3 Year promise contingent on 23% reduction**
 - Would have considered 19%, however 13% not close enough

2013-14 Season Proposed Rule

- **Zone 1: 15 days**
- **Zone 2: 38 days + 7 totes + Harvester Logbooks**
 - Whiting & Denny's Bay 9 days, 5 extra days
 - Early: Oct, Nov & Dec
 - Late: Dec, Feb March
- **Cannot solicit comments for rulemaking today, however, can discuss & encourage comments during rulemaking on any changes to the proposed rule**
- **Public Hearings tentatively scheduled**
 - June 10 in Wiscasset @ 6pm
 - June 13 in Ellsworth @ 6pm
- **July DMR Advisory Council will vote on final rule**

Owner-Operator Requirement

- Commissioner wishes to pursue for all mobile fisheries
 - Scallops, Mussels, Sea Cucumbers + Urchins
- Consistent with Maine's historical approach to fisheries
- Ensures that fishermen are invested in the fishery
- Fishermen are responsible for activities on vessel
- Avoids corporate ownership & license consolidation
- GOAL: Discuss ways to implement an owner-operator requirement for all mobile fisheries in a fair and equitable manner in the coming months for a bill that will be put in to Legislature next winter.

April Scallop Owner-Operator Meeting Highlights

- May increase effort, as multiple licenses working on one vessel. They may bring more boats into fishery
- Could decrease effort, as a vessel would only be able to participate in one “early” or “late” season
- Will takes away non-license holder opportunities, as they can current take a license holder on board
- Charge owner of vessel a fine, in addition to license holder
- Current business arrangements would be impacted [hired Captains/Crew license holders]
- Wont reduce effort, can form a corporations; sign over 51% ownership.
- Would help with violations/suspensions as vessel would be tied to license
- Suspension should be entire following season

Appendix C

Proposed 2013-14 Season Calendars

2013 - 2014 Sea Urchin Season for Maine Zone 1

O = Open = Closed

Early Season for Divers, Rakers and Trappers

September 2013						
S	M	Tu	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October 2013						
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20	21	22	23	24	25	26
27	28	29	30	31		

Late Season for Divers, Rakers and Trappers

December 2013						
S	M	Tu	W	Th	F	S
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Early Season for Draggers

December 2013						
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Late Season for Draggers

December 2013						
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January 2014						
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2013 - 2014 Sea Urchin Season for Maine Zone 2

☒ = Open ☐ = Closed

Early Season for Divers, Rakers and Trappers

October 2013						
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November 2013						
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December 2013						
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Late Season for Divers, Rakers and Trappers

December 2013						
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January 2014						
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February 2014						
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Early Season for Draggers

October 2013						
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November 2013						
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December 2013						
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Late Season for Draggers

December 2013						
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January 2014						
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February 2014						
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March 2014						
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23	24	25	26	27	28	29
30	31					

2013 - 2014 Sea Urchin Season for Maine Zone 2 Whiting & Denny's Bay Limited Access Area Calendar

 = Open  = Closed

Early Season for Divers, Rakers and Trappers

October 2013							November 2013							December 2013						
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13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

Late Season for Divers, Rakers and Trappers

December 2013							January 2014							February 2014							March 2014						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
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22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22
29	30	31					26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29
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Early Season for Draggers

October 2013							November 2013							December 2013						
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		1	2	3	4	5						1	2	1	2	3	4	5	6	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

Late Season for Draggers

December 2013							January 2014							February 2014							March 2014						
S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S	S	M	Tu	W	Th	F	S
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22
29	30	31					26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29
																					30	31					